



Microsoft Windows Server 2008 and Microsoft Exchange 2007 Customer Solution Case Study



Overview

Country or Region: Singapore

Industry: Social Services

Customer Profile:

MINDS is one of the oldest and largest non-governmental organizations in Singapore, catering to the needs of the intellectually disabled since 1962.

Business Situation

MINDS wanted to replace its existing email system which was reaching the end of its support life cycle. At the same time, it wanted to consolidate its servers to achieve better resource utilization.

Solution

The MINDS IT team migrated the email system from Exchange 2000 to Exchange 2007 which it deployed on the Windows Server 2008 platform. It also began the deployment of Hyper-V virtualization at its headquarters.

Benefits

- Cost savings through hardware consolidation
- 50 per cent reduction in management and maintenance effort
- Reduced downtime
- Enhanced productivity through improved email features
- Improved collaboration



EPROM Data Systems Pte Ltd

MINDS reaps the benefits of enhanced collaboration and virtualization

"With the new Windows Server 2008 platform and email system, there has been an 50 per cent reduction in IT support requests because the new system has proven to be more easy to manage and more reliable."

Ms Chia Siew Tong, IT Administrator, MINDS

Faced with the limited functionality and the end of the support lifecycle, MINDS decided to upgrade its existing email system to Microsoft Exchange 2007 to take advantage of the new feature-rich Outlook Web Access interface and enhanced collaboration capabilities.

At the same time, it decided to move to Windows Server 2008 to take advantage of its virtualization capabilities. Virtualization would enable MINDS to improve server utilization by consolidating its hardware resources. As a result, MINDS has been able to avoid up to \$12,000 in additional hardware investments while enjoying cost savings from reduced management and maintenance overheads. Virtualization has also presented the organization with a cost-effective disaster recovery and business continuity solution for its mission-critical email system.

Microsoft®
Exchange Server 2007


Windows Server® 2008
Hyper-V™

Situation

MINDS is one of the oldest and largest non-governmental organizations in Singapore, catering to the needs of the intellectually disabled since 1962. The organization runs four special education schools, three Employment Development Centres, three Training and Development Centres, two homes (one for adults, one for children) and a



hostel for adults. These facilities, which are located across Singapore, cater to the educational, vocational, social and welfare needs of the intellectually disabled.

In 2000, Microsoft's sponsorship of Windows 98 and Office 2000 enabled MINDS to kick-start its computerization process. It was also then that the organization started using email. "Previously, for any communication between our centres, we had to fax or call, and the response would take longer. We didn't have any server, and we weren't able to share data," said MINDS' IT Administrator Ms Chia Siew Tong. "With the Microsoft sponsorship, we started using email and now we cannot live without it."

MINDS has about 500 staff, about 250 of whom store and access their emails remotely via Outlook Web Access (OWA) over the Internet. Until recently, the email was hosted

on Exchange Server 2000 at the organization's headquarters at Margaret Drive. However, OWA 2000 was limited in terms of its features and functionality. As Mr Ng Boon Hong, IT Support Engineer with MINDS, explained, "Users could not include their signature in their emails and the interface wasn't very friendly. For example, it was not easy to find a particular address in the address book."

Another issue that MINDS faced was the end of the support life cycle for Exchange Server 2000. At the same time, new PCs running the Windows Vista operating system did not work well with the old version of OWA on Exchange Server 2000.

Email aside, the organization also wanted to achieve better utilization of its server resources. MINDS was running 22 servers, eight of which were located at the headquarters. The servers supported services such as File and Print, Dynamic Host Configuration Protocol (DHCP), Domain Name System (DNS), mail, web services, database, the Human Resource Management System (HRMS), accounting, antivirus, backup and Microsoft SharePoint Services.

Selection

Upgrading Exchange Server 2000 to Exchange Server 2007, and running it on a new Windows Server 2008 Hyper-V platform would help the organization to address these requirements. Exchange Server 2007 comes with a rich set of functionality for collaboration as well as a familiar, easy-to-use OWA interface. "It looks like the interface of the full Outlook Email Client, with the familiar drag-and-drop, right click features, so there would be no need for extra training for the users," said Mr Ng.

Running the system on Windows Server 2008 would enhance its robustness because the operating system incorporates health management as well as automatic diagnostic and troubleshooting tools to ensure the availability of applications. More significantly, Windows Server 2008 also comes with Microsoft's free virtualization software, Hyper-V. "Previously, we could only run one application on one server, because there may be conflict between the software if we tried to put two applications together. When we read about virtualization, we felt it was a good technology. We would be able to make use of one physical server to run a few virtual machines, and have individual applications running in each virtual machine," said Mr Ng.

Virtualization would also present MINDS with a quick disaster recovery and business continuity solution for its email system. The organization would be able to backup and restore its applications easily on the virtual machines should there be a hardware failure.

Solution

EPRM Data Systems, a Microsoft SME IT Advisor, helped the organization to secure charity pricing for the Microsoft licences. To migrate from Exchange Server 2000 to Exchange Server 2007, the MINDS IT team tapped on resources and information that were readily available on Microsoft's TechNet.

The migration took place in phases, with the IT team completing one centre before moving on to the next. In all, it took about three months to test and migrate the email system for 500 users. Both the old and new Exchange servers were running in parallel for about four months before the old system was finally decommissioned in January 2009.

MINDS is also deploying Hyper-V at its headquarters, starting with the new HP server which hosts Exchange Server 2007. With virtualization, it will be able to run multiple applications on a single machine. Existing systems can also be consolidated, with multiple versions of an application or operating system running on a single machine. "We will be able to upgrade the hardware without having to worry about whether the hardware can support the old version of the software," said Mr Ng. For example, MINDS currently has SQL Server 7 and SQL Server 2000 running on two different servers. With the virtualization capabilities of Windows Server 2008, all these applications can now be supported on the same physical machine.

Going forward, MINDS intends to invest in another server running Windows Server 2008 with Hyper-V. This will be used to host its new Volunteer Management System as well as to consolidate some of the existing servers (for example, the HRMS and web server). With two servers running Windows 2008 with Hyper-V, virtual machines running MINDS' critical applications can be copied from one server to another should there be a case of hardware failure on one of the machines.

Benefits

MINDS' recent upgrades have paved the way for many benefits from two fronts - virtualization and the deployment of Exchange Server 2007.

Cost savings through hardware consolidation

According to MINDS, virtualization has enabled it to avoid about \$12,000 in additional hardware costs - costs which it would have incurred due to the need to provision new

hardware for each new application. In fact, with virtualization, MINDS may even be able to retire two or three servers by creating virtual machines to run new as well as the existing applications, said Mr Ng.

By eliminating the need for additional machines, there will also be a lower load on its uninterruptible power supply, which will be able to support the new set-up without any need for an upgrade. Then there is the issue of space. "The more you buy, the more space you will need. You will also have to purchase racks," said Ms Chia. "Virtualization will enable us to avoid these costs."

50 per cent reduction in management and maintenance effort

MINDS estimates that with the new Windows Server 2008 platform and email system, there has been a 50 per cent reduction in IT support requests because the new system has proven to be more easy to manage and more reliable, said Ms Chia. Going forward, she expects that virtualization will further reduce the maintenance effort. "Instead of three servers, you may just need to maintain the hardware for one server," she said.

50 per cent time savings in provisioning new servers

Setting up a new server, which used to take about two or three days, now can be done within a day. "Previously, when a new application came in, we would have to go and buy a new server. We would then have to set up the server and install the system software and drivers before we put in the new application," said Mr Ng. "With virtualization, you can create a new virtual machine with just a few clicks, and you no longer have to install the drivers individually."

Reduced downtime

In the event of hardware failure, an application can be easily transferred from one virtual machine to another and continue running, minimising any disruption to the user while efforts are being made to rectify the problem.

For More Information

For more information about Microsoft products and services, go to:
www.microsoft.com/singapore

For more information about EPROM Data Systems, call +65-6339 9792 or visit the Web site at: www.eprom.com.sg

For more information about MINDS, call +65-64795655 or visit the Web site at: www.minds.org.sg

Enhanced productivity through improved email features

New and enhanced features on Exchange Server 2007 have been well received by the users at MINDS, said Mr Ng. For example, if they want to search for an address, they can simply type in the name to do a search, or sort by name, title or any other parameter and browse the list of addresses that meet the search criteria. The "Out of office" feature - which previously could only be activated or deactivated on the spot - now has an effective date functionality which allows it to be set in advance.

Improved collaboration

Capabilities such as enhanced calendaring, resource booking, and scheduling have helped to simplify collaboration. The integration of Exchange and Windows Server 2003 with SharePoint Services also makes it easier for users to find and share data. For example, when management needed to access data stored on the file server, they used to have to log in through the virtual private network. Now, with a new "Shared Documents" function on SharePoint and on the Windows file server, they can directly access the information stored in the file server.

Software and Services

- Software and services
- Windows Server 2008
- Windows Server 2003 with SharePoint Services
- Windows Server 2000
- Exchange Server 2007

Hardware

- HP Proliant DL360G5
- APC 2200 and APC 5000

Partner

- EPROM Data Systems